Glass Alliance Europe reiterates concerns on Eco-Design of Furnaces Draft Final Report – calls for glass to be excluded

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Executive summary

The industrial ovens or furnaces found in the glass industry are not produced in a repetitive series. They are rather large, specialized, multimillion Euro furnaces that are custom built for each client. They are not produced on an "industrial scale" and cannot be considered products put on the market as intended by article 2.1 of the Eco-Design Directive such as a microwave ovens.

Glass furnaces are part of the industrial production system in plants with upstream and downstream processes. These complex industrial sites are regulated by specific pieces of environmental legislation like the Emission Trading Scheme for CO2 and energy efficiency and the Industrial Emissions Directive for the other emissions, guaranteeing a high level of efficiency and environmental protection.

Therefore, the Glass industry calls on the Commission and the consultants to exclude glass furnaces from the eco-design requirements.

Glass Alliance Europe comments on the draft report

In January 2010, DG Entreprise have launched a project on eco-designs for Industrial and Laboratory Furnaces and Ovens DG ENTR Lot 4 in the context of the Ecodesign Directive. ERA Technology and Bio Intelligence Services have been appointed to write a report to assess the feasibility of eco-design and propose policy recommendations.

A meeting was held on the 26th of March to discuss the final draft of this report. Compared to the previous meeting, Task 5 was completed (performance parameter data added to report), Task 6 was finalized, and Task 7 was initiated, but not yet finalized.

Glass Alliance Europe has taken knowledge of the report and would like to raise the following concerns:

1) We are of the opinion that glass furnaces are not simple products (like lamps or refrigerators) which are put on the market, as defined in article 2.1 of the Eco-Design Directive. They are generally designed on a case by case approach to achieve specific requirements. In our industry, there is no such thing as two identical furnaces. Moreover, glass furnaces are not used in isolation but are part of a production system, with upstream and downstream processes which can influence the overall design and efficiency of the furnace. Specific and isolated eco-design criteria for industrial furnaces are therefore not the right tool to address the environmental performance as they would be too rigid and may negatively influence the overall environmental performance and it would inhibit innovation.
2) The glass sector is already covered by environmental legislation like the Emission Trading Scheme (ETS) for energy efficiency and CO_2 emissions, and by the Industrial Emissions Directive (IED) for all the other emissions. Moreover, the IED, quite correctly, takes an integrated approach, looking at all pollutants including the cross media abatement

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implications e.g. NOx abatement versus increased energy use. This is a much more appropriate tool than using the eco-design criteria. Sectors covered by ETS and IED should therefore not be covered by eco-design criteria which would entail duplicate and potentially conflicting regulation. Indeed it is the continual review of efficiency and fuel use by operators (and the regulators under the existing legislation) which helps to drives innovation and change.

3) Furthermore focusing on energy use in glass furnaces, we would like to bring your attention to an analysis into the competitiveness of the glass industry carried out by DG Enterprise in 2008 which underlines that the energy improvement potential in the glass furnaces is very low[1]. The relatively high energy intensity of glass production makes reducing energy a major imperative for our industry. The study shows however that the technologies used in glass production to minimise energy use are already mature and that short-term future increases in efficiency are likely to be limited. The study acknowledges that manufacturers are close to the physical limits of efficiency due to the laws of thermodynamics and the limitations of modern materials for furnace construction. Indeed, taking advantage of the need to periodically rebuild furnaces inherent to the glass industry, all sub-sectors have implemented each time the most recent technologies in burners, refractories, furnace design, etc. The study recognises that since the 1960s, the glass industry as a whole has reduced specific energy consumption by approximately 1.5% per year, i.e. by ca. 50% in total.
4) From the meeting held on the 26 of March, which glass experts attended, it was quite obvious that the policies recommended by the consultant were based on a small number of questionnaires returned by a small number of stakeholders. We therefore strongly recommend that the report includes **a very clear indication of the number of answers per Base Case and per sectors covered**, on which each recommendation is based. Only in this way will it be possible to assess the representativeness of the survey and indeed how appropriate each recommendation appears to be.
5) Some refer to Japan as a benchmark where such eco design criteria are applied. Following consultation with our members, we have been informed that the only mandatory obligation in Japan is to report data to the competent authorities. There is also the potential to debate the targets and the results are open to discussion. Not all requirements are fully implemented in practice. In comparison the EU already has a tougher approach because :
    a. the reporting of CO_2 emissions under EU-ETS directive includes reporting on energy consumption
    b. very ambitious target have to be achieved, under the benchmark it is the average of the top 10% best that means to avoid buying CO2 allowances you must be in the top 5%.
    c. In the case of non-compliance (i.e. requiring the purchase and surrender of allowances each year) the penalties are very high.
6) We notice that where different energy saving measures have been identified for a furnace, there is a tendency to naively add up the savings to find a total improvement potential (see e.g. page 435, table 163 for industrial furnaces). This ignores the fact that some measures are mutually exclusive. Proper analysis is necessary to achieve a realistic and workable result.
7) As you will see from the above, we oppose the very principle of eco-design for glass furnaces. Whilst it is not our wish in this paper to go into technicalities, we would like to point out one example of a serious discrepancy. We were very surprised to see in the report criteria based on temperature while nowhere is it actually explained where the temperature should be measured: is it the temperature of the material, the highest temperature in the furnace, the

[1] http://ec.europa.eu/enterprise/sectors/metals-minerals/files/finalreport_glass_141008_en.pdf

temperature at the exit of the furnace, in the regenerator, at the bottom of the stack etc.? This lack of engineering precision only confirms our doubts about the suitability of the initiative with respect to large, specialized, multimillion Euro, furnaces such as those found in the glass industry.

8) We are also extremely surprised by some figures, quoted without any source (e.g. on page 330, a 25% energy savings using cullet pre-heater for oxy-fuel furnaces seems unrealistically high).

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About Glass Alliance Europe

Glass Alliance Europe is the European Alliance of Glass Industries. It is composed of 19 national glass associations and of the main sectors of the glass industries: container glass, flat glass, special glass, domestic glass and continuous filament glass fibres.

Over Europe, glass-makers employ around 150.000 people.

Glass industries invest in research, develop and manufacture glass products fit for a sustainable, resource-efficient and low-carbon society such as energy-efficient windows, fully recyclable bottles and jars, weight-lightening continuous glass fibres, glass for photovoltaic modules, etc. Glass industries continuously invest in upgrading manufacturing installations to minimize the carbon content of products and increase their recycling.

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